DOCUMENT RESUME

ED 159 275 UD 018 566

AUTHOR Smith, James P.
TITLE The Improving Economic Status of Black Americans.
INSTITUTION Rand Corp., Santa Monica, Calif.
SPONS AGENCY Department of Health, Education, and Welfare, Washington, D.C.; National Science Foundation, Washington, D.C.
PUB DATE Jan 78
NOTE 18p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Affirmative Action; Black Education; *Black Employment; *Blacks; Cohort Analysis; *Comparative Analysis; Economic Factors; *Economic Progress; *Economic Status; Employment Patterns; Equal Opportunities (Jobs); Rural to Urban Migration; *Salary Differentials; Sex Differences; Statistical Analysis; Working Women

ABSTRACT

The major explanations for the narrowing in wage differentials between blacks and whites can be placed under four general categories: (1) more recent black cohorts begin their job experiences with larger initial stocks of human capital than previous cohorts; (2) the rural South to urban North migration has partly been superceded by Southern blacks moving to what are now economically vibrant Southern cities; (3) the effects of government affirmative action; and (4) changes in other aspects of the market such as the choice of full or part-time work, unique characteristics of certain occupations, and biases due to sample censoring. The rise in the ratio of black to white male and female wages is largely explained by converging nominal characteristics, with education playing the dominant role. Although migration accounts for only nine percent of the relative wage growth of black men and women, the South dominates regional comparisons. Relative black/ white ratios for both sexes have risen more rapidly in the South, especially among the young. As with migration, affirmative action programs were not a major contributor to rising relative wages. However, direct and indirect government employment, combined with the adoption of full-time jobs, the elimination of domestic services as their primary function, and rising educational levels, have contributed significantly to the remarkable wage advances of black women. (Author/EB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

AUG 2 3 1978

ED159275

THE IMPROVING ECONOMIC STATUS OF BLACK AMERICANS

James P. Smith

January 1978

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Rand Corporation

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

UD018566

P-6055

The Rand Paper Series

Papers are issued by The Rand Corporation as a service to its professional staff. Their purpose is to facilitate the exchange of ideas among those who share the author's research interests; Papers are not reports prepared in fulfillment of Rand's contracts or grants. Views expressed in a Paper are the author's own, and are not necessarily shared by Rand or its research sponsors.

The Rand Corporation
Santa Monica, California 90406

THE IMPROVING ECONOMIC STATUS OF BLACK AMERICANS*

JAMES P. SMITH

The Rand Corporation

*This paper summarizes work from a large project on race differences in income funded by grants from NSF and ASPE of HEW. Part of this project is conducted with my colleague Finis Welch whose assistance on this paper is gratefully acknowledged.

While contemporary rhetoric often highlights differences between races, the data show that blacks are becoming less distinguishable from whites in at least one relevant index of performance--market earnings. Relative to white males, black male earnings have gradually increased, but the rise during the 1960s and the early 1970s is larger than that observed earlier. (See Table 1). Yet, it is clearly the contrast between white and black females that is extraordinary. Twenty years ago the average black woman employed full-time was earning approximately half the wage of a similarly-employed white woman. By 1975, almost complete racial parity among women had been achieved. In a recent article,[1] Finis Welch and I argued that the advance in the relative income of black males between 1960 and 1970 was due mainly to converging educational distributions by race and a narrowing in wage differentials between regions. Skill levels were relatively constant within cohorts and convergence was accomplished as increasingly racially-similar cohorts entered labor markets while other less similar cohorts retired. Finally our test of affirmative action pressures indicated that before 1970 they had little impact. My first objective is to update our previous research to determine if the events of the last decade for males have continued unabated into the mid-1970s. Since a complete understanding of the dynamics of black-white changes necessitates explaining the patterns for females, my second goal is to expand the wage comparisons to include women.

The major explanations for narrowing in racial wage differences can be placed under four general categories. The central idea of the vintage hypothesis is that relative to whites, more recent black cohorts begin their job experiences with larger initial stocks of human capital than previous cohorts. The second explanation involves migration. The rural-South to urban-North migration has partly been superseded by Southern blacks moving to what are by now economically vibrant Southern cities. The third category involves the effects of government affirmative action. Since 1970, it is alleged that a series of

court cases imposing severe financial penalties on firms for non-compliance with affirmative action goals have added sharp teeth to government jaw-boning. Finally, changes in other aspects of market work may be important. This is more relevant for women and includes the choice of part- or full-time work, unique characteristics of certain occupations, and biases due to sample censoring.

Evidence of Cohort Convergence

Our principal explanation for the improved economic status of blacks is that successive cohorts of blacks and whites are simply becoming more alike in those attributes producing higher wages. In 1930, the average black new labor force entrant had credentials quite different from his white competitor. (See Table 2). The typical black male (female) began a work career with 3.7 (2.6) fewer years of formal schooling than their white counterparts. Almost 70 percent of these blacks had a grade school diploma or less and only 3 percent had any post-secondary schooling. As successive cohorts entered the labor force, the competitive disadvantage of blacks continuously dissipated. By 1970, 1.2 (.3) years of schooling separated black and white males (females) at the time of their initial labor force experience. Further, fewer than 10 percent of these new black workers had less than 9 years of schooling and almost a fifth had some post-secondary education. Even as current education levels by race converge, the weight of the past will depress relative wages of blacks. However, in tracking changes over time, this generational improvement will contribute to convergence between races. Blacks not only have higher education levels relative to whites than their fathers did, but they also have parents with more education relative to whites than their parents had.

The story conveyed by nominal years of schooling is reinforced by data on schooling quality. The current, and often valid, criticism of the quality of contemporary black education makes us forget that the historical situation was much worse. The data (see Table 3) on nominal characteristics of schools tell a

clear story of improving relative quality of black schools.[2] In 1920, black youths attended school only 2/3 as many days as white students, but there were no real black-white differences in days attended by 1954. Similarly, in 1920 teachers of black students had 1-3/4 as many pupils as the average teacher in the country. By 1954, this difference had been substantially reduced. The extraordinarily high ratio of first to second graders suggests that on average a black student took about 2 years to complete the first grade in the 1930s. Retention rates that average 100 percent suggest low quality education coupled with inflexible standards. Between 1940 and 1954 implicit retention rates in Southern Negro schools moved toward the national norm. It is difficult to link attributes of schools to measures of school achievement. Indeed, some of the measures offered may have had little impact on achievement, but the consistent picture of simultaneous convergence in all these dimensions makes the case for improving quality of black schools plausible.

Summary of Regression Results

Regressions for males are based on eight Current Population Surveys for 1968-1975 inclusive. In each year, separate samples were extracted for black and white males between the ages 14 and 65. The dependent variable is the (ln) weekly wage and the explanatory variables fall into five classes: schooling, regional residence, market experience, direct and indirect government employment, and a set of estimated probabilities controlling for non-full-time work -- the probability of zero earnings, part-time work, and full-time part-year work. A similar wage equation was estimated for black and white married women between the ages 21 and 60 using the 1960 and 1970 U.S. Census. The dependent variable was the (ln) hourly wage. The explanatory variables were divided into five classes: schooling, region, direct and indirect government employment, full- or part-time work, and age.

Using the OLS regression estimates, the change in the black-white wage ratio

between 1960 and 1970 is

$$(1) \qquad \Delta \ln \bar{R} = [(\bar{X}_{B70} - \bar{X}_{B60}) - (\bar{X}_{W70} - \bar{X}_{W60})]b_o + (\bar{X}_{B70} - \bar{X}_{B60})\delta_1 + (\bar{X}_{W60} - \bar{X}_{B60})'\delta_2 - (\bar{X}_{B60} - \bar{X}_{W70})\delta_{12} - (\delta_{12}\bar{X}_{W70})$$

b_o is the parameter vector for white women in 1970, δ_1 is the black-white difference in parameters in 1970, δ_2 is the difference in white parameters between 1960 and 1970, and δ_{12} is the 1960-1970 change in black-white difference in parameters. A similar procedure is used for changes in the male wage ratio between 68 and 75. The first term measures that part of the growth in black-white wage ratios due to contraction or expansion in black-white differences in characteristics. The other terms capture the impact of differential payments between races and across years. A detailed description of the results is contained in Smith (1977) and Smith-Welch (1977) and they will only be summarized here.

Almost 1/2 (1/3) of the rise in the ratio of black-white male (female) wages is explained by converging nominal characteristics. As new cohorts of black workers enter the market, the distinction between races in income-producing attributes is eroding and leading to a narrowing of the wage gap by race. Education plays the dominant role, explaining 47 (59) percent of the relative growth in black male (female) wages due to greater characteristic congruency. The large influx of black females into direct and indirect government employment explains an additional 20 percent of the female rise attributable to more similar attributes, while movement of black women from part-time to full-time jobs explains 12 percent. Migration accounts for only a small positive amount (9 percent) of the relative wage growth of black men and women.

The other terms in equation 1 provide additional insight into the differential structure of wage equations by race and the role of these differences in explaining improvement among blacks. For elementary and secondary schools, I estimate lower schooling coefficients for black males. If school systems are not an effective mechanism for increasing black male income, the problem is

concentrated at the elementary and secondary levels. The marginal returns to college are actually higher for black males particularly in the early years of market experience, perhaps due to increasing black attendance at racially mixed Northern colleges. In contrast to a declining white college coefficient, the returns to college for black males have remained stable over this period. For all women, education coefficients rose dramatically with schooling level and increased over the decade. Female wages typically increased by less than one percent per year of elementary school education and less than five percent for the high school segment. No significant racial difference in education coefficients exists for women below the college level. But the premia to college are approximately 15 percent for black women and 10 percent for white. The direct effect of converging schooling levels was partially offset by differential rates of return between races and across years. For example, in male comparisons the larger white schooling coefficients imply that whites gain more as schooling levels rise even if differences in schooling by race remain constant. Similarly, the increased return to female schooling over the decade benefitted white women more than black women because they have more schooling.

In explaining changes in wage ratios, the South dominated regional comparisons. The Southern variables account for a significant part of the rise in both black male and female wages. Although migration flows had a small favorable impact on blacks, convergence towards the national norm in black-white Southern wage ratios is far more important. Relative black-white wage ratios for both sexes have risen more rapidly in the South, especially among the young. For males with less than 10 years of experience and for women under 30 years old, relative black wages have increased by 10 percent more than in the rest of the country. For older workers, the male (female) ratio rose by 5 (3) percent more in the South. In addition to the general improvement for Southern blacks, there was a reduction in black-white wage inequality among Southern states and between

urban and non-urban areas particularly among more recent cohorts. Vintage effects are greater in the South and affect all Southerners, but they are larger among blacks than whites. New black Southern workers apparently will enjoy career prospects that differ significantly from those which confronted their predecessors.

Direct and indirect government employment was used to test for the effect of affirmative action programs. Indirect government employment measures employment in industries regulated by either federal or state and local governments and the fraction of an industry's sales that go to either the federal or state and local governments. The argument is that if affirmative action has an impact, it should be strongest on employment and wage trends in these industries. The public sector is becoming a more important employer of all blacks (relative to whites), but the changes observed for black males are small compared to those of black women. The proportion of black women employed in government rose from .18 to .28. For indirect government employment, the proportion of black women has also risen sharply both absolutely and relative to white females.

While the direct effect of increased government employment raised relative wages of black men and especially black women, black-white wage ratios have declined in these sectors. The large black wage gains were achieved in the private sector and not in those industries most susceptible to affirmative action pressures. In fact, this wage decline was so large that the government variables actually predict a decline in the wages of black men relative to white men. The situation for black females is more ambiguous. This relative deterioration in black-white female wages in these government sectors also lowered the gains attributed to government to a small positive amount. However, the magnitude of the employment inroads made by black women suggests that they are the most likely recipients of any beneficial effects of affirmative action. If quotas are imposed that include both race and sex as criteria, black women have a clear advantage.

By filling two quotas for the price of one, they are the cheapest avenue open to employers to adhere to employment quotas. Any beneficial impact of quotas on groups that possess one targeted characteristic should be attenuated by the existence of a dual-attributed group.

The race-year intercept indicates that relative to whites the black regression line has shifted upwards over time. It is this shift combined with converging characteristics that explains the bulk of the rise in relative black income. This shift is the predictable consequence of any secular improvement in the relative quality of black men and women not captured by nominal measures of characteristics included in earnings functions. While this improvement at the front end of the labor market is open to other interpretations, the evidence advanced earlier suggests that relative vintage effects for blacks deserve high priority. The age and experience variables indicate that cross-sectional black wage profiles have become flatter (relative to whites), so that vintage effects may in fact be accelerating over time.

Cohort and Life Cycle Comparisons: The Evidence for the Vintage Hypothesis

One feature common to all cross-sectional studies of black-white earnings differences is that younger blacks fare better in comparison to whites than their older counterparts. Secondary labor market theories of discrimination tended towards a life-cycle explanation holding that over-the-career black earnings increase less rapidly than for whites. In the cohort view, however, the observed cross-sectional decline in relative black-white wages with experience simply reflects the fact that less-experienced workers are simultaneously members of new cohorts. By comparing cross-sections at different points in time, the potential of distinguishing life cycle and cohort effects is established.

For males, individual year CPS regressions are used to predict relative black-white wage paths with experience under two assumptions. The first is based on the 1967 CPS regression and measures the predicted life cycle path

from the cross-section. The second uses the complete series of CPS cross-sections and traces the predicted wage path for a given cohort in 1967 as it gains market experience. The cross-sectional patterns (see Table 4) uniformly predict declining black-white male wage ratios with years of market experience. It is this cross-sectional decline that gave credence to the secondary labor market view. But the within-cohort trends indicate that, if anything, black-white male wage ratios have increased over the career especially for more schooled workers. Therefore, the weight of the evidence supports cohort improvement and rejects the secondary labor market hypothesis. There is also clear support for strong vintage effects for black females with the most rapid wage improvement accruing among the youngest females. However, there also exist substantial wage gains within cohorts. Factors that operate mainly at the front end of the labor market apparently are not the sole cause of these recent trends for females.

Additional Reasons for the Rise in Black Female Wages

In 1960, over 1/3 of all married black working women were domestic servants in contrast to only 2 percent of white women. More than 25 percent of 21-25 year old black women were domestics, so that it was an important source of employment for new entrants. But over the decade, the fraction of black women in domestic services declined to 14 percent with less than 3 percent of the youngest black women employed there. The changes within the South were even more dramatic. Half of all employed Southern black women were domestics in 1960, but this proportion fell to less than a quarter by 1970. Particularly noteworthy are the trends observed among younger workers where the proportion declined from fifty to five percent. Since non-pecuniary and non-reported wages are purported to be a large part of total compensation for domestics, the extent of the real black wage improvement may be overstated. Given the historical importance of domestic service for black women, an indepth study of this market is obviously required before any complete understanding of the recent wage improvement of black

women can be achieved.

Between 1960 and 1970, the percentage of black women working less than 30 hour declined from .27 to .17. Blacks in 1960 were more likely to have part-time jobs than white women, but this reversed over the decade, suggesting that new white market participants have selected part-time work. Blacks gained in three ways from this shift into full-time jobs. Most directly, their observed weekly and annual earnings are higher as a result of their increased work effort. Part-time jobs also tend to be transitory over time, so that full-time work may signal a more permanent commitment to the labor force. Finally, if full-time employees receive higher wage rates, observed mean black wages will rise as they shift into full-time work. The problem is that my Census estimates indicate that in 1970 black women earned eight percent less for full-time work, so that the shift into full-time jobs predicts a fall in black-white female hourly wages. Because of the absence of direct information on hourly wages in the Census, it is clearly not the ideal data for estimating breakpoints in the wage-hours locus. More appropriate data will ultimately determine the importance of this adoption of full-time employment in raising black female wages.

One difficulty with wage comparisons among women is that wage rates are directly observable only for working women. This "selectivity" bias could distort measured average wage differences among groups of women differing in their labor force participation rates. When female wage equations were reestimated correcting for censoring bias, the preliminary results indicated that this bias may have contributed to the recorded rise in the relative wage of black women. Among white women, the average wage of working women exceeds that for all white women, but the opposite appears true for black women. Thus non-working black women would apparently receive higher wages than currently employed black women, but they choose not to work because their non-marketable opportunities are even higher. One cause of the more rapid rise for black women is that as their par-

ticipation rates rose over the decade, wages of the average working black female increased because the additional workers had wage offers that exceeded those available to those already working.

Conclusion

In general, the variables that explained the rise observed between 1960 and 1970 were also the principal reasons for the more recent improvement among black males: increased congruency in education and the narrowing of between-region racial wage differentials. Confirming a conclusion reached for the 1960s, affirmative action programs were not a major contributor to rising relative wages of black males. The increased similarity in education distributions and the rapid rise in black wages in the South were also important reasons for the remarkable wage advances of black women. While the evidence on affirmative action is mixed, the primary beneficiary may well have been black women. Adoption of full-time jobs, elimination of domestic services as their primary occupation, and the increase in participation rates in light of preliminary results on sample censoring have all contributed to the rise in black female wages. Finally, my evidence rejects the secondary labor market view that black males and females are relegated to dead-end jobs with little career growth potential. Rather, it favors the alternative vintage hypothesis that more recent cohorts of blacks are more similar to whites in marketable skills than were their black predecessors.

REFERENCES

J. P. Smith, "The Convergence to Racial Equality in Women's Wages," in Cynthia Lloyd, ed., Women in the Labor Market, forthcoming.

J. P. Smith and F. Welch, "Black-White Male Wage Ratios: 1960-1970," Amer. Econ. Rev., June 1977, 67, 323-338.

----------, "Race Differences in Earnings: A Survey and New Evidence," in P. Mieszkowski and M. Strasszheim, eds., Issues in Urban Economics, Vol. 2, forthcoming.

F. Welch, "Education and Racial Discrimination," in O. Ashenfelter and A. Rees, eds., Discrimination in Labor Markets, Princeton University Press. 1974.

FOOTNOTES

1. See "Black-White Male Wage Ratios," Amer. Econ. Rev., June 1977.

2. For a detailed examination of this data, see Welch (1974).

TABLE 1

RATIOS OF MEDIAN WAGE INCOMES BY RACE AND SEX FOR SELECTED YEARS, 1947-1975

A. Race Differentials Within Sex

Year	All Workers		Full-Time Workers	
	Black Females / White Females	Black Males / White Males	Black Females / White Females	Black Males / White Males
1947	.340	.543	.543	.640
1951	.421	.616	N/A	N/A
1955	.433	.588	.570	.635
1959	.532	.580	.664	.612
1963	.531	.568	.636	.654
1967	.643	.639	.765	.675
1969	.721	.666	.816	.694
1973	.896	.695	.882	.719
1974	.977	.709	.941	.736
1975	.973	.734	.986	.769

Source: Various Issues of Current Population Surveys

TABLE 2

YEARS OF SCHOOL COMPLETED AT ESTIMATED TIME OF LABOR MARKET ENTRY

	Year of Labor Market Entry				
	1930	1940	1950	1960	1970
males					
Mean Schooling of Blacks	5.9	8.0	9.9	11.1	11.4
Mean Schooling of Whites	9.6	11.1	12.0	12.6	12.6
Proportion of Blacks with less than 9 years of school	0.78	0.58	0.31	0.15	0.11
Proportion of Whites with less than 9 years of school	0.42	0.22	0.15	0.10	0.07
females					
Mean Schooling of Blacks	8.0	10.1	11.2	11.6	12.1
Mean Schooling of Whites	10.6	11.4	11.9	12.0	12.5
Proportion of Blacks with less than 9 years of school	0.58	0.27	0.15	0.09	0.04
Proportion of Whites with less than 9 years of school	0.29	0.15	0.09	0.08	0.03

TABLE 3

COMPARISONS OF TWENTIETH CENTURY TRENDS IN CHARACTERISTICS BETWEEN THE SEGREGATED NEGRO SCHOOLS, SOUTHERN WHITE SCHOOLS, AND ALL U.S. SCHOOLS

Days attended, enrollment per teacher, and the ratio of first to second grade enrollment. A comparison of segregated Negro schools to other schools, 1900-1954:

	Average Days Attended Per Pupil Enrolled		Pupils Enrolled per Classroom Teacher		Enrollment in First Relative to Second Grade	
Year	Negro Schools	All Schools	Negro Schools	All Schools	Negro Schools	All Schools
1899-1900	57	69[a]	56.7	42.5[a]	1.37	1.14[a]
1908-09	71	88	56.4	39.9[a]	1.45	1.49[a]
1919-20	80	121	56.0	31.8	1.96	1.64
1929-30	97	143	43.7	30.0	2.35	1.48
1939-40	126	152	45.3	29.0	2.03	1.29
1949-50	148	158	33.6	27.5	1.62	1.20
1953-54	151	159	32.9	27.9	1.45	1.25

[a]Southern white schools only.

TABLE 4

COMPARISONS OF CROSS-SECTIONAL AND LIFE CYCLE BLACK-WHITE WAGE RATIOS

A. MALES

	Years of Market Experience				
	1	5	10	15	20
Schooling = 16					
1967 cross-sectional observation[1]	.834	.806	.779	.760	
life cycle prediction		.892	.912	.842	.792
Schooling = 12					
1967 cross-sectional observation	.853	.817	.781	.755	
life cycle prediction		.852	.829	.799	.783
Schooling = 8					
1967 cross-sectional observation	.892	.817	.880	.808	
life cycle prediction		.913	.844	.819	.808

B. FEMALES

	age			
year	25-34	35-34	45-54	55-64
1967	.731	.753	.716	.584
1971	.924	.879	.837	.696
1975	.971	.926	.871	.734

1. In 1967, the cross-section predicted that the wage ratio of those with 5 years experience would decline from .806 to .779 with 5 more years in the market, but by 1972 the wage ratio for this cohort was .912.